REMARKS

The application has been reviewed in light of the final Office Action dated September 19, 2008. Claims 1-17 are pending. By this Amendment, claims 1-3 have been amended to clarify the claimed subject matter. Accordingly, claims 1-17 remain pending upon entry of this amendment and are presented for continued examination, with claims 1-3 being in independent form.

Claims 1-17 were rejected under 35 U.S.C. § 102(b) as purportedly anticipated by Kusunoki et al. (WO 03/026897 A1).

Applicant submits that the present application is allowable over the cited art, for at least the reason that the cited art does not disclose or suggest the aspects of the present application that at least one of the two or more different portions of the driving waveform is a portion of an ejecting pulse, and the non-ejecting pulse generated by said driving signal generating unit using the two or more different portions of the driving waveform has a pulse width greater than that of the ejecting pulse and has a smaller electric potential difference than that of the ejecting pulse.

The above-mentioned aspects are shown in, for example, Figures 14A-14E (reproduced below) of the present application which show clearly two different portions of the driving wave form (S1 and S6) which are used by the driving signal generating unit to produce a non-ejecting pulse (Figure 14E) having a longer pulse width and smaller potential difference than that of the ejecting pulses (Figs. 14B-14D), waveform portion S6 is also used to form a portion of the ejecting pulse shown in Figure 14D. As discussed in the present application, such aspect efficiently eliminates the degradation of a printed image due to resonation of the printing head while enabling printing speed to be increased.

FIG.14A

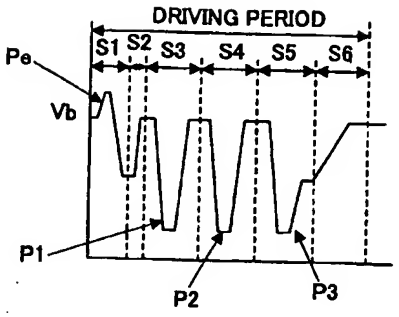


FIG.14B

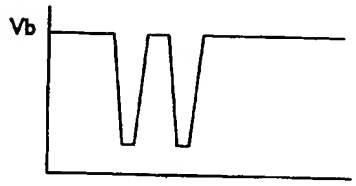


FIG.14C

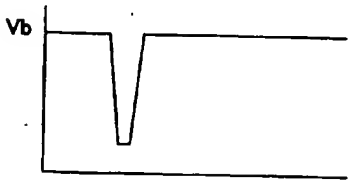


FIG.14D

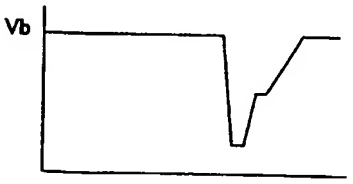
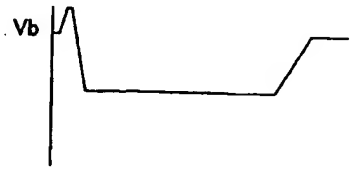


FIG.14E



In contrast, Kusunoki does not disclose or suggest using two or more different portions of the driving waveform to produce a non-ejecting pulse. Further, Kusunoki does not disclose or suggest that the non-ejecting pulse should be of a longer pulse width and smaller potential difference than that of the ejecting pulse.

The Office Action cited Figs. 15-18 of Kusunoki. Figs. 15 and 16 of Kusunoki are reproduced below:

FIG.15

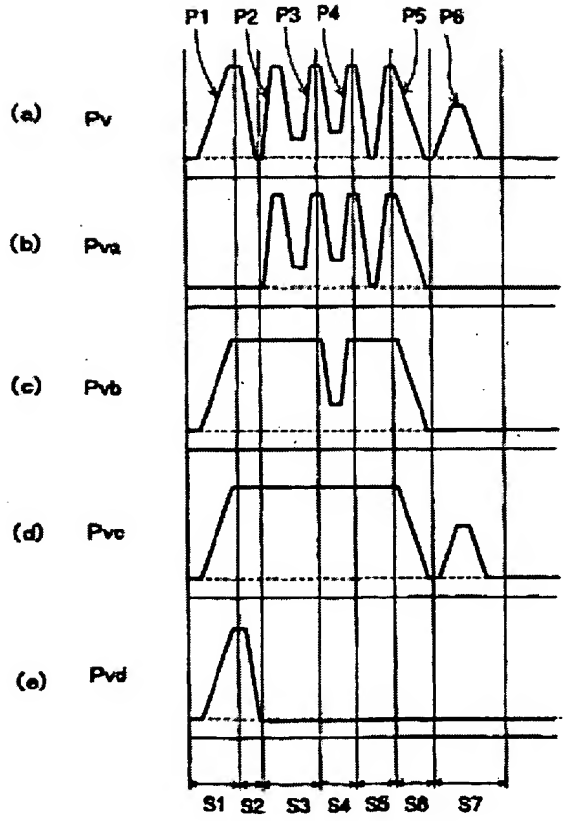


FIG.16

	S1	S2	S3	S4	S5	S6	S7
Mj1 (LARGE)	0	0	1	1	1	1	0
Mj2 (MEDIUM)	1	0	0	1	0	1	0
Mj3 (SMALL)	1	0	0	0	0	1	1
NON-DISCHARGE DRIVING	1	0	0	0	0	0	0

In the approach corresponding to Figs. 15 and 16 of Kusunoki, the driving waveform has portions S1-S7. As clearly shown in Fig. 16, only one portion (S1) of the driving waveform is used for the non-discharge driving signal (Pvd). That portion (S1) has an equal or shorter pulse width than the ejecting pulses (Pva, Pvb, Pvc) and has a potential difference equal to the ejecting

pulses.

Figs. 17 and 18 (reproduced below) of Kusunoki correspond to a different embodiment (page 14, lines 16-19):

FIG.17

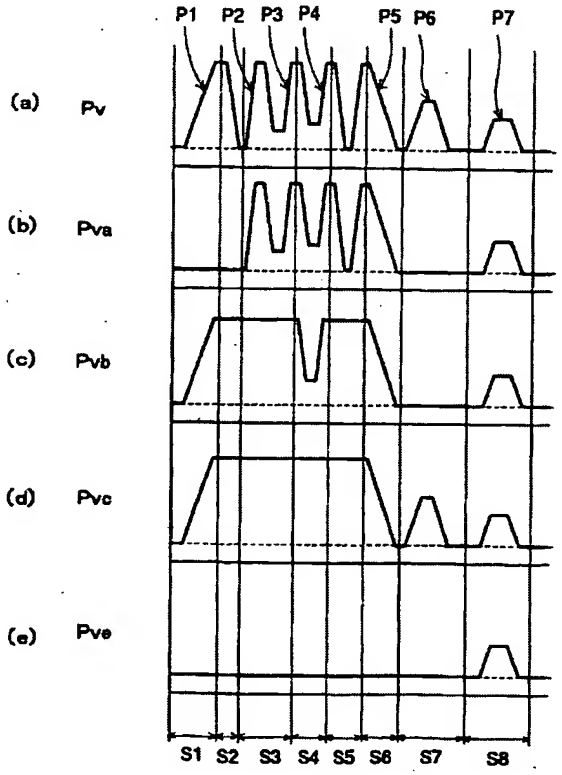


FIG.18

	S1	S2	S3	S4	S5	S6	S7	S8
Mj1 (LARGE)	0	0	1	1	1	1	0	1
Mj2 (MEDIUM)	1	0	0	1	0	1	0	1
Mj3 (SMALL)	1	0	0	0	0	1	1	1
NON-DISCHARGE DRIVING	0	0	0	0	0	0	0	1

In the embodiment corresponding to Figs. 17 and 18 of Kusunoki, the driving waveform has portions S1-S8. As clearly shown in Fig. 18, only one portion (S8) of the driving waveform

is used for the non-discharge driving signal (Pve). That portion has an equal or shorter pulse width than the ejecting pulses (Pva, Pvb, Pvc).

Kusunoki simply does not disclose or suggest using two or more different portions of the driving waveform to produce a non-ejecting pulse having a longer pulse width and smaller potential difference than that of an ejecting pulse.

Applicant submits that the cited art, even when considered along with common sense and common knowledge to one skilled in the art, does ***NOT*** render unpatentable the above-mentioned aspect of the present application.

Accordingly, independent claims 1-3 of the present application, and the claims depending therefrom, are submitted to be allowable over the cited art.

Claim 2 of the present application is allowable for the additional reason that the cited art does not disclose or suggest that the driving waveform includes first and second dummy pulses, and the driving signal generating unit produces the non-ejecting pulse making use of a portion of the first dummy pulse and a discontinuous portion of the second dummy pulse. Such feature is present in the example of Table 2 of the present application wherein S1 corresponds to one dummy pulse and S7 corresponds to a second dummy pulse.

Fig. 10 of Kusunoki does not correspond to a non-ejecting pulse making use of a portion of the first dummy pulse and a discontinuous portion of the second dummy pulse.

As indicated in Kusunoki, page 27, line 8 through page 28, line 13, Fig. 10 shows a driving waveform having waveform elements "a"-"e" that is applied as a driving signal to a piezoelectric vibrator to cause a droplet to be discharged. Only waveform element "a" is described as not discharging a droplet (page 27, line 25 through page 28, line 5 of Kusunoki). Examiner asserts that the first and second elements do not discharge a droplet. Even if

examiner's assertion is true, the first and second waveform elements are not discontinuous portions of dummy pulses and are not used by the driving signal generating unit to produce a non-ejecting pulse.

Claim 3 of the present application is allowable for the additional reason that the cited art does not disclose or suggest that the driving waveform includes a dummy pulse and the driving signal generating unit produces the non-ejecting pulse, making use of a portion of the dummy pulse and a discontinuous portion of the ejecting pulse.

In view of the remarks hereinabove, Applicant submits that the application is now in condition for allowance, and earnestly solicits the allowance of the application.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition. The Patent Office is hereby authorized to charge any fees that are required in connection with this amendment and to credit any overpayment to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Respectfully submitted,

Date: December 10, 2008

Paul Teng, Reg. No. 40,837
Attorney for Applicant
Cooper & Dunham LLP
30 Rockefeller Plaza
New York, N.Y. 10112
Tel.: (212) 278-0400